

REMARKS

The fact that December 24, 2004 (a Friday) was a Holiday ensures that this paper is timely filed as of Monday, December 27, 2004, the next succeeding day which is not a Saturday or Sunday.

In the Office Action dated April 2, 2004, pending Claims 1-21 were rejected and the rejection made final. In response Applicants have filed herewith a Request for Continued Examination and have amended independent Claims 1, 9 and 17. Applicants intend no change in the scope of the claims by the changes made by this amendment. It should be noted these amendments are not in acquiescence of the Office's position on allowability of the claims, but merely to expedite prosecution.

Applicants and the undersigned are most grateful for the time and effort accorded the instant application by the Examiner. Claims 1-17 were pending in the instant application at the time of the outstanding Office Action. Claims 1, 9, and 17 are independent claims; the remaining claims are dependent claims. The Office is respectfully requested to reconsider the rejections presented in the outstanding Office Action in light of the following remarks.

Claims 1-4, 9-12, and 17 stand rejected under 35 USC § 102(b) as being unpatentable over Weinstein et al. Various dependent claims stand rejected under 35 USC 103(a) over Weinstein et al. in combination with various references. Claims 5 and 13 stand rejected under 35 USC 21 103(a) as being unpatentable over Weinstein et al. in view of Beirle. Claims 6 and 14 stand rejected under 35 USC § 103(a) as being

unpatentable over Weinstein et al. in view of Beirle and further in view of Sonmez et al. Claims 7 and 15 stand rejected under 35 USC § 103(a) as being unpatentable over Weinstein et al. in view of Beirle and Sonmez et al. and further in view of Ammar et al. Reconsideration and withdrawal of the present rejections is hereby respectfully requested.

The remarks previously presented with respect to Weinstein et al. are also applicable here. As presently understood, Weinstein et al. appears to be directed to a signal processing system which reconstructs source signals. Weinstein et al., however, requires "that the signals are statistically independent." (Col. 1, lines 42-43) As further stated in Weinstein et al., "[t]he proposed method is universal in the sense that no assumptions are made about the source signals, except that they are statistically independent." (Col. 5, lines 9-12) Weinstein et al. continues that "[in the two channel case ... [w]e observe the outputs ... of an unknown 2X2 stable LTI [linear time invariant] system ..."

Independent Claims 1, 9, and 17 have all been amended to recite "at least one interfering signal, wherein said one interfering signal is not be statistically independent of said initial speech signal". As such, it is respectfully submitted that Brin et al. clearly falls short of present invention. Accordingly, Applicants respectfully submit that the applied art does not anticipate the present invention because, at the very least, "[a]nticipation requires the disclosure in a single prior art reference of each element of the claim under construction." W.L. Gore & Associates, Inc. v. Garlock, 721 F.2d 1540, 1554 (Fed. Cir. 1983); see also In re Marshall, 198 U.S.P.Q. 344, 346 (C.C.P.A. 1978).

A 35 U.S.C. 103(a) rejection requires that the combined cited references provide both the motivation to combine the references and an expectation of success. Not only is there no motivation to combine the references, no expectation of success, but actually combining the references would not produce the claimed invention. Thus, the claimed invention is patentable over the combined references and the state of the art.

Claims 5 and 13 stand rejected under 35 USC § 103(a) as being unpatentable over Weinstein et al. in view of Beirle. As presently understood, in Beirle it is recommended that there be a signal conditioning step in which the relative amplitudes of the input and reference signals adjusted before the signals are sent to the speech enhancement module. (See Col. 6, lines 30-35) This contrasts with the present invention, however, in which a “normalizing arrangement is adapted to estimate at least one characteristic of the at least one reference signal given at least one characteristic of the initial speech signal.” Thus, it is respectfully submitted these rejections should be withdrawn.

Claims 6 and 14 stand rejected under 35 USC § 103(a) as being unpatentable over Weinstein et al. in view of Beirle and further in view of Sonmez et al. As presently understood, Sonmez et al. uses multiple codebooks: a reference codebook representing the characteristics of the speech features in the reference environment and several other codebooks representing the characteristics of the speech features in distinct and known environments. The Office Action asserts that “Sonmez et al. teach[es] the use of a single codebook referring to a signal characteristic for use in a normalizing arrangement.” A review of Sonmez et al., however, shows there are at least two codebooks used. See Col. 3, lines 39-40 (a codebook for the reference environment denoted Xref) and Col. 3, lines

46-48 (codebooks for the secondary environments denoted X_h with $h=1, \dots, H$). While the number of codebooks used Somez et al. is $H+1$, the minimum number used is 2 (in the case $H=1$). This contrasts with Claims 6 and 14, which recite "referring to a single codebook". Thus, it is respectfully submitted these rejections should be withdrawn.

Claims 7 and 15 stand rejected under 35 USC § 103(a) as being unpatentable over Weinstein et al. in view of Beirle and Sonmez et al. and further in view of Ammar et al. The previously presented comment on Ammar et al. are also applicable here. As presently understood, Ammar et al. teaches the use of a feedback compensation term (Figure 1), in which the enhanced speech output by the speech enhancement system is used as an input to compute the compensation term. This difference from the present invention in which there is no feedback. As set forth in the specification, the compensation term of Claims 7 and 15 is computed from the input and reference signals and the codebook vector. Thus, it is respectfully submitted these rejections should be withdrawn.

By virtue of dependence from what are believed to be allowable independent Claims 1 and 9, it is respectfully submitted that Claims 2-8 and 10-16 are also presently allowable. Applicants acknowledge that Claims 8 and 16 were indicated by the Examiner as being allowable if rewritten in independent form. Applicants reserve the right to file new claims of such scope at a later date that would still, at that point, presumably be allowable.

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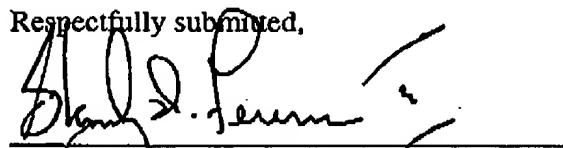
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The "prior art made of record" has been reviewed. Applicants acknowledge that such art was not deemed by the Office to be sufficiently relevant as to have been applied against the claims of the instant application. To the extent that the Office may apply such art against the claims in the future, Applicants will be fully prepared to respond thereto.

In summary, it is respectfully submitted that the instant application, including Claims 1-17, is presently in condition for allowance. Notice to the effect is hereby earnestly solicited.

Respectfully submitted,



Stanley D. Ference III
Registration No. 33,879

Customer No. 35195
FERENCE & ASSOCIATES
400 Broad Street
Pittsburgh, Pennsylvania 15143
(412) 741-8400
(412) 741-9292 - Facsimile

Attorneys for Applicants